

Post-Doctoral Fellowship: Proposal Outline

Topic	Building Irish expertise in emerging environmental and societal pressures on the Arctic region
Research Theme(s)	<ol style="list-style-type: none"> 1) Climate Change 2) Marine Pollution 3) Safety at Sea 4) The Blue Economy
Background and Rationale	<p>The coordination of research efforts on a regional, national, and international scale is becoming increasingly urgent to address the emerging environmental and societal pressures on the Arctic region that have global significance and impacts. Ireland is a near Arctic Island nation located in the North Atlantic, and the changes taking place in the Arctic impact directly on us. For example, the predicted increase in storm frequency and intensity for the Irish west coast in response to Arctic Amplification poses a tangible threat to coastal communities of the Irish West Coast (erosion, flooding, and infrastructure,).</p> <p>In addition, the predicted changes in atmospheric circulation are also likely to influence ocean circulation and upper ocean properties resulting in a weaker subpolar gyre circulation, which in turn allows warmer and saltier waters to reach the west coast of Ireland and thereby impact the distribution of primary producers and economically important fisheries.</p> <p>Furthering our understanding of high-to-mid-latitude teleconnections linking Arctic environmental, socio-economical, and security challenges to Ireland is of strategic importance as outlined in foreign policy document <i>Global Ireland - A Strategy for the Nordic Region</i>, where Ireland is committed to facilitate collaboration, sharing, and coordination of scientific, technological, and socio-economical expertise linked to the Arctic and thereby contribute to solving these challenges.</p>
Scope of Research (Scientific/ Technical Challenge)	<p>Ireland wishes to play a constructive role in the Arctic, because of the significance of the Arctic region globally, and the increasingly adverse impact climate change and environmental pollution is having on the Earth's oceans, resources, maritime security, and environment. This fellowship will develop deeper collaboration between Ireland and the Nordic countries on areas of common concern and shared interest including halting biodiversity loss; support for post-2020 UN climate targets; mitigating the effects of climate change on our oceans, safety at sea, the blue economy, and preventing pollution including marine litter.</p> <p>Specifically, this fellowship will focus on Ireland-Arctic teleconnections and advance the state of the art on at least one of the following priorities:</p> <ul style="list-style-type: none"> • Environmental and ecosystem consequences in the Arctic resulting from global climate change (including ocean acidification). • Low-latitude climate drivers of Arctic environmental change • Effects of pollution on ecosystems and/or the health of humans living in the Arctic

	<ul style="list-style-type: none"> • Plastics and micro-plastics: impacts and low-to-high latitude depositional pathways. • Maritime border security and navigational safety challenges within the Arctic • Examination of the economic importance of coastal and offshore marine environments in the Arctic
Expected Impact(s)	<p>The Nordic Strategy stands alongside the Irish application for observer status on the Arctic Council in late 2020. One of the pillars of the application is Ireland’s strong and developing scientific expertise in Arctic-related science, technology, and development.</p> <p>To support these national priorities, the fellow will engage with peers, policymakers, and the public by:</p> <ul style="list-style-type: none"> • Synthesising policy-relevant findings in succinct and accessible policy briefs • Consulting the Department of Foreign Affairs on their future application for Observership on the Arctic Council. • Establishing new or deepen existing research and/or educational networks with Nordic partner institutions to improve international relations and raise the international profile and reputation of Ireland. • Actively participating in yearly network meetings organized by the Network of Arctic Researchers in Ireland (NARI) • Publishing research findings as widely as possible through peer-reviewed papers, conference presentations, articles, etc. • Engaging in outreach, social media, and project website development to raise the national and international visibility of Ireland-Arctic related research.
Outcomes	<p>The fellow will engage with European and international networks and initiatives relating to the Arctic and explore opportunities for collaboration and securing further research funding under Horizon Europe, including the Mission to Restore our Ocean and Waters by 2030.</p> <p>This fellowship will help to build national expertise in this research area and thereby contribute to <i>Global Ireland - A Strategy for the Nordic Region</i> via enhanced research and scientific collaboration with the region.</p>
Specific Collaboration	<p>The Fellow will enhance Ireland’s engagement on Arctic and Ocean issues across the range of, established fora, including through the OSPAR (Oslo and Paris) Commission, the Northeast Atlantic Fisheries Commission, ICES and the Network of Arctic Researchers in Ireland (NARI). Future collaborations may be established through the Working Groups of the Arctic Council.</p> <p>The Project will also develop new or deepen existing collaborative linkages with Nordic Partner Institutions.</p>
Location of Fellow	Higher Education Institute or Public Research Body (Republic of Ireland or Northern Ireland)

Duration and Funding Available	<p>4 years</p> <p>€100,000 per annum (i.e. total €400,000 maximum for duration of four years)</p>
References	<p>Global Ireland - A Strategy for the Nordic Region, Delivering for Ireland in the Nordic Region to 2025 https://www.dfa.ie/media/ireland/nordicstrategy/21-011-Nordic-Strategy_Final_digital.pdf</p> <p>Roadmap to support the achievement of OSPAR objectives in the Arctic https://www.ospar.org/documents?v=48547</p> <p>ICES Working & Expert Groups for the Arctic https://www.ices.dk/news-and-events/news-archive/news/Pages/ICES-Science-Highlights-Arctic.aspx</p> <p>Arctic Council Working Groups https://www.arctic-council.org/about/working-groups/</p> <p>AMAP Assessment 2018: Arctic Ocean Acidification. Arctic Monitoring and Assessment Programme (AMAP), Tromsø, Norway. vi+187pp (2018)</p>